REVISION E

Prepare and Manage NASA SMA Requirements Documentation

Bryan O'Connor
Chief Safety and Mission Assurance Officer

December 3, 2004
Date

Approved for public release; distribution is unlimited.

DOCUMENT HISTORY LOG

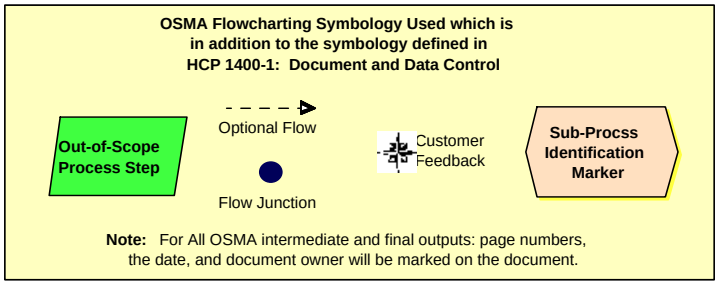
Status (Draft/ Baseline/ Revision/ Canceled)	Document Revision	Effective Date	Description
Baseline		January 13, 2000	
Revision	A	April 14, 2000	Modified Section 5 Flowchart outputs from steps 6.05, 6.07, & 6.10 and modified steps 6.12, and 6.16; Editorial corrections to steps 6.03, 6.04, 6.06, 6.07, 6.09, 6.10, and 6.12 – 6.17; Added second Quality Record to Section 7
	B	February 2, 2002	Added customer list, customer feedback to sections 5, 6.09, 6.12, and 6.14. Editorial corrections to sections 1, 3.10, and 4.3. Updated procedures for adoption of standards in sections 6.01, 6.02, 6.06, 6.08, 6.09, 6.13, 6.14, and 6.17. Removed HATS action item tracking from sections 6.05, 6.13, and 7. Changed retention of Discipline Review Draft and OSMA Approved Document in section 7. Due to the cancellation of HOWI 1410-Q003, the following changes were made: Section 3.13, flowchart step 6.05, steps 6.05, 6.08, 6.13, and 6.17.
	C	October 31, 2003	Added definitions. Modified process steps 6.03 through 6.07, 6.09, 6.10, 6.13, 6.16, and Appendix A to reflect changes in OSMA organization and new NODIS and NASA Standards processing.
	D	March 31, 2004	Editorial and organizational changes to all sections.
	E	December 3, 2004	Modified scope to address new content and format specifications. Added definitions. Modified process to clarify and to require adherence to content and format specifications found in Appendix B. Added Appendix B - Content and Format Specifications for SMA Requirements Documents. Editorial changes throughout to accommodate NASA transformation.

HOWI Author: Wil Harkins

OSMA Staff Member Responsible for this HOWI: Michael Stamatelatos, Ph.D.

Customers for this HOWI: Internal: HQ Offices and NASA Engineering Standards Steering Committee

External: none


OSMA Flowcharting Symbology Used which is in addition to the symbology defined in HCP 1400-1: Document and Data Control
Out-of-Scope Process Step
Optional Flow
Flow Junction
Customer Feedback
Sub-Procss Identification Marker
Note: For All OSMA intermediate and final outputs: page numbers, the date, and document owner will be marked on the document.

1. Purpose

The purpose of this Office of Safety and Mission Assurance (OSMA) Headquarters Office Work Instruction (HOWI) is to document the process for the initiation and development of NASA Safety and Mission Assurance (SMA) requirements documents. For the purposes of this OSMA HOWI, OSMA-developed NASA Policy Directives (NPDs), NASA Procedural Requirements (NPRs), NASA Standards, SMA-sponsored standards that are adopted, and the SMA Functional Leadership Plan are considered SMA requirements documents. This OSMA HOWI also specifies the retention requirements for Quality Records associated with the process (paragraph 6) and supplemental information for document retention (Appendix A).

2. Scope and Applicability

2.1 This OSMA HOWI is applicable to the propagation of SMA requirements documents by the OSMA organization. (See paragraph 3 definition for SMA requirements documents for a description of the types of documents considered to be SMA requirements documents for the purposes of this OSMA HOWI.)

> Note: The propagation of OSMA HOWIs is covered by HOWI 1410-Q001.
>
> Note: This process interfaces with a more global process owned by the HQ Office of Infrastructure, Management, and Headquarters Operations as defined in NPD 1400.1.

2.2 The requirements delineated in Appendix B are applicable to all SMA requirements documents published after the issuance of Revision E of this OSMA HOWI.

3. Definitions

3.1. Chief SMA Officer: Chief Safety and Mission Assurance Officer.

3.2. DD: Division Director.

3.3. DL: Document Lead.

3.4. DTM: Document Tree Manager.

3.5. DM: Directives Manager.

3.6. HATS: Headquarters Action Tracking System.

3.7. NASA Policy Directive (NPD): NPDs are policy statements that describe "what" is required by NASA management to achieve NASA's vision and mission. An NPD may relate to one or more subordinate NPRs that describe associated procedural requirements. NPDs apply to all NASA Centers and Component Facilities. The Administrator signs all NPDs (refer to NPR 1400.1).

3.8. NASA Procedural Requirements (NPR): NPRs provide mandatory procedures and requirements to implement NASA policy as delineated in an associated NPD (refer to NPR 1400.1).

3.9. NASA Standard (NASA-STD): NASA technical standards are NASA documents that contain common and repeated use of rules, conditions, guidelines, or characteristics for products or related processes and production methods, and related management systems practices. NASA technical standards may contain the definition of terms; classification of components; delineation of procedures; specification of dimensions, materials, performance, designs, or operations; measurement of quality and quantity in describing materials, processes, products, systems, services, or practices; test methods and sampling procedures; or descriptions of fit and measurements of size or strength. Within NASA the broad term "Standard" may include the following specific document types: Codes, Guidebooks, Handbooks, Specifications, and Standards (refer to NPD 8070.6 and the "*Guidelines for Preparing NASA Technical Standards (Handbooks, etc.) as tailored from MIL-STD-962C*").

3.10. NHQ Form 184: NASA Directive Request Summary, filled out online in NODIS to initiate an Agency directive review.

3.11. NODIS: NASA Online Directives Information System.

3.12. Objective Quality Evidence: Any statement of fact, either quantitative or qualitative, pertaining to the quality of a product or service based on observations, measurements, or tests which can be verified. (Evidence is expressed in terms of specific quality requirements or characteristics. These characteristics are identified in drawings, specifications, and other documents which describe the item, process, or procedure.)

3.13. OSMA Management Council: OSMA's management steering group comprised of the Deputy Chief SMA Officer, DD/Mission Support Division, DD/Safety and Assurance Requirements Division, DD/Review and Assessment Division, and the OSMA Resources Manager.

3.14. Plans: NASA documents that present goals, objectives, and operational details to guide users in achieving NASA's mission. NASA's planning process starts with long-term Vision and Mission and flows to more focused near-term plans and documents. Appendix IV of NPD 1000.1, NASA Strategic Plan, describes the relationship among strategic and planning documents.

3.15. PM: Program Manager.

3.16. SMA Documentation Tree: A graphical representation of how the OSMA has assembled and interrelated its documents using a visual graphical interface. The tree may be used to both understand the document set for which OSMA is responsible and can be used for a hyperlink to meta-data about the document, the document status, the document itself, and training that may also be available. The document tree is maintained by the OSMA Document Tree Manager with the OSMA Webmaster and is located at http://www.hq.nasa.gov/office/codeq/doctree/index.htm.

3.17. SMA Functional Leadership Plan: The SMA document that sets the overall direction, goals, objectives, and strategies for SMA within NASA.

3.18. SMA Requirements Document: OSMA-developed NPDs, NPRs, NASA Standards, SMA-sponsored standards that are adopted, and the SMA Functional Leadership Plan are considered SMA requirements documents for the purposes of this OSMA HOWI.

3.19. SMARTS: Safety and Mission Assurance Requirements Tracking System.

3.20. Work Instructions: Work instructions are NASA documents that contain instructional requirements applied to an individual organization that define the processes used to deliver products to customers or to meet the organization's mission requirements as defined by Directives. OSMA work instructions are developed in accordance with HOWI 1410-Q001.

4. Reference Documents

The documents listed in this section are used as reference materials for performing the processes covered by the Quality Management System (QMS). Since all NASA Headquarters Level 1 (QMS Manual) and Level 2 (Headquarters Common Processes) documents are applicable to the QMS, they need not be listed in this section unless specifically referenced in this OSMA HOWI.

4.1. *NPR 1400.1: NASA Directives System Procedural Requirements.*

4.2. *NPR 1450.10, NASA Correspondence Management and Communications Standards and Styles.*

4.3. NPD 8070.6: *Technical Standards.*

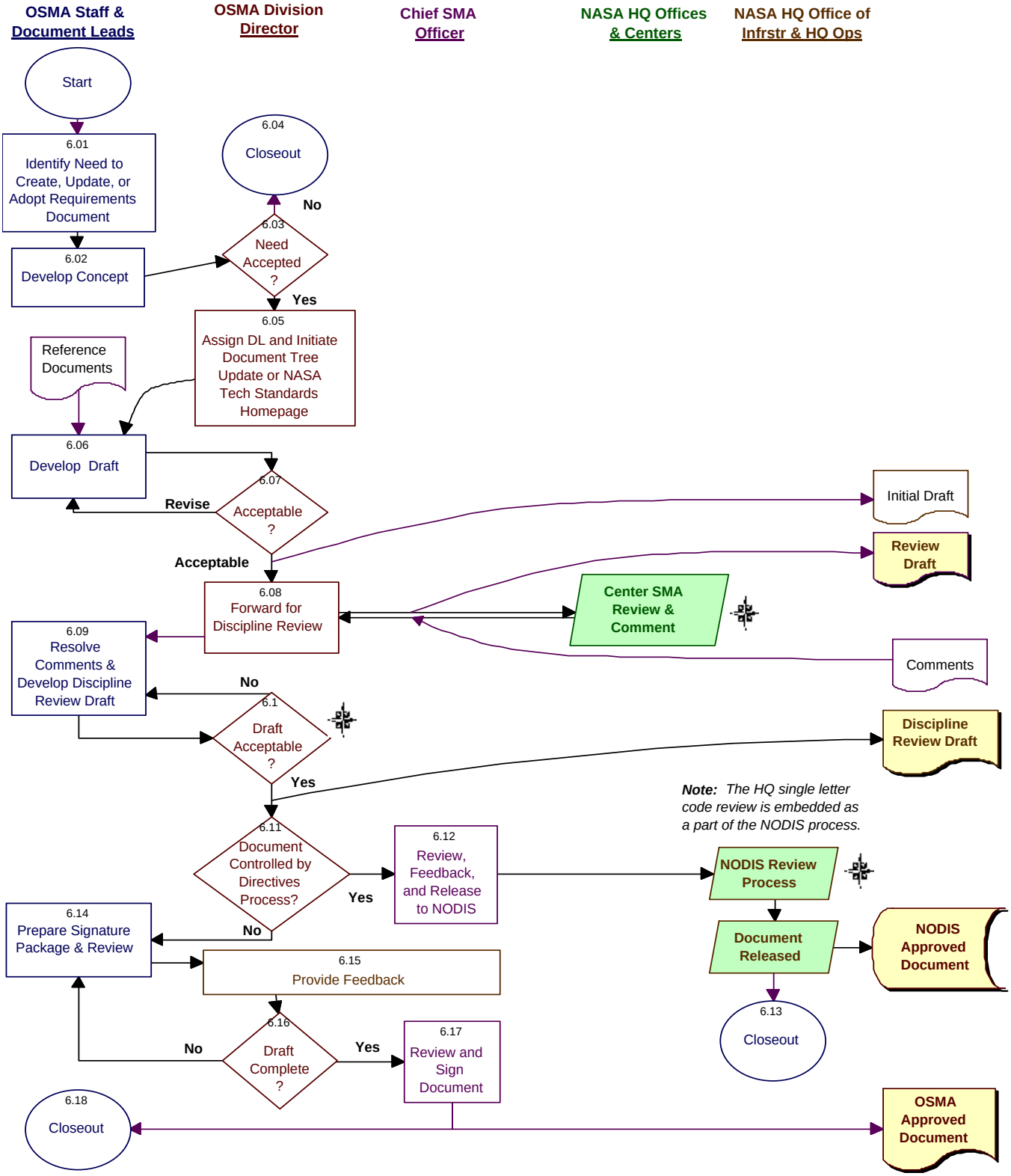
4.4. Guidelines for Preparing NASA Technical Standards (Handbooks, etc.) (Tailored from MIL-STD-962C, dated 31 July 2001) (http://standards.nasa.gov/procsguidlns.pdf).

4.5. The Gregg Reference Manual, Eighth Edition, 1998.

4.6. Presidential Memorandum of June 1, 1998, Plain Language in Government Writing (http://www.plainlanguage.gov/cites/memo.htm).

4.7. NASA Headquarters Office Work Instruction (HOWI 1410-Q001): Develop and Maintain OSMA HOWIs

5. Flowchart


OSMA Staff & Document Leads
OSMA Division Director
Chief SMA Officer
NASA HQ Offices & Centers
NASA HQ Office of Infrstr & HQ Ops
Start
6.01 Identify Need to Create, Update, or Adopt Requirements Document
6.02 Develop Concept
6.03 Need Accepted ?
No
Yes
6.04 Closeout
6.05 Assign DL and Initiate Document Tree Update or NASA Tech Standards Homepage
Reference Documents
6.06 Develop Draft
6.07 Acceptable ?
Revise
Acceptable
Initial Draft
Review Draft
6.08 Forward for Discipline Review
Center SMA Review & Comment
Comments
6.09 Resolve Comments & Develop Discipline Review Draft
No
6.1 Draft Acceptable ?
Yes
Discipline Review Draft
Note: The HQ single letter code review is embedded as a part of the NODIS process.
6.11 Document Controlled by Directives Process?
Yes
6.12 Review, Feedback, and Release to NODIS
NODIS Review Process
No
6.14 Prepare Signature Package & Review
6.15 Provide Feedback
Document Released
NODIS Approved Document
6.13 Closeout
6.16 Draft Complete ?
No
Yes
6.17 Review and Sign Document
6.18 Closeout
OSMA Approved Document

6. Procedure

6.01 OSMA Staff Member — Identify Need to Create, Update, or Adopt Requirements Document:

The need to develop a new or update or adopt a current SMA requirements document may be identified through a number of means. Means of identifying a need include, but are not limited to: the identification of a gap in the requirements tree for OSMA, direction from the senior management, changes in regulations or laws of an external authority, the identified need by customers needing guidance, a deficiency identified by evaluation of request for variance (refer to HOWI 8700-Q004), functional reviews, compliance verifications, audits, or benchmarking efforts.

6.02 OSMA Staff Member — Develop Concept:

The OSMA staff member identifies and details the documentation deficiency, establishes a plan for the SMA requirements document development, update, or adoption, and briefs the associated Division Director and/or other management.

6.03 DD — Need Accepted with OSMA Management Council Concurrence?

a. The OSMA Division Director (DD) with responsibility for the document area (NOTE: see OSMA website for OSMA Division responsibilities) reviews the concept developed in the previous step for the change and decides whether the proposal is a necessary item for work, based on professional expertise with NPD 8700.1 requirements and responsibilities. If the proposed change is not needed, the project ceases.

b. In order to assure continuity within SMA requirements documents, and to avoid duplicate or counterproductive effort, the DD informs the OSMA Management Council of the need for the proposed change and obtains OSMA Management Council agreement that the change is needed.

NOTE: This can be done via email or during an OSMA senior staff meeting.

6.04 DD — Closeout:

If the proposed change is not needed, the process is terminated.

6.05 DD, DL, DTM — Assign DL and Initiate Document Tree Update:

a. If the OSMA Management Council concurs with the need for a change, the DD assigns a staff member to be responsible for the SMA requirements document development, update, or adoption as the Document Lead (DL) of the change.

b. The DL notifies the Document Tree Manager (DTM) of the change.

c. The DTM ensures that the new/revised document is added to the SMA Documentation Tree. An interim document number is assigned by the DTM or, if the proposal is to adopt a standard, that appropriate data is added to the NASA Technical Standards Program candidates for adoption.

6.06 DD, DL Develop Draft:

a. The DL, with advice from the DD, develops the draft document or proposal for adoption of a standard in accordance with references in Section 4 and Appendix B of this OSMA HOWI.

6.07 DD Acceptable?

The DD decides whether the document is mature enough to send out for discipline review or return for additional work, based on the DD's professional expertise and knowledge of SMA policies and conformance to the content and format specifications for SMA requirements documents.

6.08 DD, DL, DD/Safety and Assurance Requirements Division, DTM

Forward for Discipline Review:

a. The DD and the DL determine who should review the draft during the discipline review. At a minimum, each Center SMA Director and all OSMA DDs shall be included in the discipline review. Other reviewers may be added internal and external to NASA based on the subject and interfaces affected. For new NPDs, new NPRs, or significant revisions to an existing NPD/NPR, the Headquarters Offices and Centers that are impacted shall be invited to participate in the discipline review (the DL works with the Directives Manager (DM) to determine the appropriate reviewers and processes). For all NASA standards, the review shall include the NASA General Counsel and the Office of External Relations.

b. The DL provides the DD-approved draft SMA requirements document (or proposed standard for adoption) and a list of reviewers (names and email addresses) in an electronic format to the DD/Safety and Assurance Requirements Division and the DTM to initiate the discipline review.

c. The DD/Safety and Assurance Requirements Division provides the document in an electronic format to the designated reviewers and specifies a due date and a point of contact for the receipt of comments. (The DD/Safety and Assurance Requirements Division copies the DM and the DTM on the review request.)

d. The OSMA DTM and the OSMA Webmaster update the SMA Document Tree to reflect the current status of the DRAFT. (Note: The SMA Documentation Tree does not include adopted standards.)

NOTE: The designated NASA HQ Offices and Centers staff the initial draft document through their respective organization(s) and provide comments back to the DL. (Internal Customer Feedback).

NOTE: Consolidating various documents into a single discipline review request may help the process.

NOTE: Nominally, the discipline review participants are given one month to provide OSMA with comments.

6.09 DL Resolve Comments and Develop the Discipline Review Draft:

a. The DL develops a response for each comment received.

b. The DL revises draft based on comments and prepares a disposition matrix that includes all of the comments received on the document and their disposition. Nominally, the DL should complete the comment disposition no later than one month from the end of the review.

c. The DL reviews the revised draft SMA requirements document, along with the disposition matrix, with the DD for a decision to proceed with further processing.

6.10 DD Draft Acceptable?

The DD decides whether to send for further processing (and file as a Quality Record) or return for additional work. The review is based on the professional expertise and knowledge of the DD and compliance with both Appendix B and NPD 8700.1. (Internal Customer Feedback).

6.11 DD Document is Controlled by the Directives Process?

The DD reviews the draft to determine if the document is defined as a directive (reference 4.1) and requires additional processing through the NASA Online Directives Information System (NODIS) process or if it can be processed directly for signature.

6.12 DL, DM, DD/Safety and Assurance Requirements Division

Review, Provide Feedback, and Release Document to NODIS:

a. The DL and the DM prepare the concurrence package for release to NODIS. The concurrence package contains the draft, the disposition matrix, and the completed NHQ Form 184.

b. The DM routes the package to all OSMA DDs, the Deputy Chief SMA Officer, and the Chief SMA Officer for concurrence.

c. Once all concurrences have been received, the DL provides an electronic copy of the revised document and disposition matrix to the DD/Safety and Assurance Requirements Division and to the DTM.

d. The DD/Safety and Assurance Requirements Division provides the comment dispositions and revised document to the reviewers for feedback.

e. The DM provides the document for release into the NODIS process in accordance with NODIS operating procedures and NPR 1400.1.

NOTE: HQ Office of Infrastructure, Management, and Headquarters Operations coordinates formal staffing of the document in accordance with NODIS procedures and recordkeeping requirements and releases and posts the signed directive to NODIS with a final document number after approval. (Internal Customer Feedback).

6.13 DM, DTM Closeout:

a. The DTM updates the SMA Documentation Tree to reflect the signed document.

b. The DM provides the final document to the SMARTS Manager.

6.14 DL, DTM Prepare Signature Package:

a. The DL prepares the document package for Chief SMA Officer signature. The signature package includes the original document, matrix of review comments and disposition, supporting documentation, including legal and external affairs review, and the final version of SMA requirement document that is to be approved.

b. The DTM assigns a final document number based on reference 4.1 guidance.

NOTE: If the review comments from the discipline review cannot be resolved in a manner that is acceptable to the DD, DL, and Reviewer, then the issue in question shall be sent to the SMA Directors for advice/consent in resolving the issue.

6.15 DD & Chief SMA Officer Provide Feedback

The DD and the Chief SMA Officer reviews the staffing package for readiness and completeness and provides feedback.

6.16 DD Draft Complete?

The DD reviews the staffing package for readiness and completeness and decides whether to send for signature or return for rework so that all issues may be resolved. If the draft is complete, the DD forwards the package for Chief SMA Officer signature.

NOTE: The DD is accountable to the Chief SMA Officer for the readiness of the document and conformance to the specifications of Appendix B.

6.17 DL, DD/Safety and Assurance Requirements Division, DTM
Provide Feedback

a. The DL provides an electronic copy to the DD/Safety and Assurance Requirements Division and the DTM of the discipline review draft with comment review material or a copy of the adoption proposal.

b. The DD/Safety and Assurance Requirements Division forwards the comment dispositions and revised document to the reviewers for feedback.

c. The DTM files the material as a Quality Record.

6.18 Chief SMA Officer Review and Sign Document:

The Chief SMA Officer reviews the draft and signs the document.

6.19 DL, DTM Closeout:

a. The DL provides a copy of the signed document to the DTM and the SMARTS Manager.

b. The DTM posts the signed document to the SMA Document Tree (and document meta-data updated).

c. In the case of adopted standards, the DTM forwards the signed adoption notice to the NASA Technical Standards Program Office. In the case of a NASA-STD, the DTM informs the curator of the NASA Standards homepage of the release of the new or updated document. The approved document with its signature is filed as a Quality Record.

7. Quality Records

Record ID	Owner	Location	Media Electronic /hardcopy	Schedule Number & Item Number	Retention & Disposition
Review Draft	DL	DL Files	Hardcopy	Schedule: 1 Item: 72.D	Keep until new document is approved and all review issues are resolved then destroy
Discipline Review Draft	DL	DL Files	Hardcopy	Schedule: 1 Item: 72.C	Keep until new document is approved and all review issues are resolved then destroy
NODIS Approved Document **Not an OSMA Quality Record**	Office of Infrastructure, Management, and Headquarters Operations	NODIS	Electronic	Per NPR 1400.1	Per NPR 1400.1
OSMA Approved Document (** Document is not in NODIS **)	OSMA DTM	Safety and Assurance Requirements Division	Hardcopy	Schedule: 8 Item 12.A	* Permanent * Retire to FRC when no longer needed for reference. Transfer to NARA when 15 years old

Appendix A: Supplemental Optional Information on Documentation Retention:

- For NASA Directives: Copy of the initial staffing package and disposition matrix in both electronic and hard copy. Copy of the signature-ready master document provided to Office of Infrastructure, Management, and Headquarters Operations for release in electronic copy (hardcopy may also be retained).
- For SMA Functional Leadership or Strategic Plan: A Master hard copy of the Plan with original signature, electronic copy of the master document, and hard copy and/or electronic copy of the disposition matrix.
- For NASA-STDs: Master NASA-STD – hard copy with original signature, electronic copy of the master document, and hard copy and/or electronic copy of disposition matrix.
- For adopted standards – a hard copy of the adoption notice with the original signature and electronic copy of the disposition matrix.

Appendix B: Content and Format Specifications for SMA Requirements Documents

All DLs shall adhere to the format and content requirements described in this Appendix when writing SMA requirements documents.

B.1 Document Type. Use the definitions in Section 3 of this OSMA HOWI to determine what type of requirements document you need to write. If you are not sure what type is appropriate for your SMA requirements document, consult the OSMA DTM.

B.2 Distribution Statement. Place on the cover sheet one of the two statements below to describe the distribution of the SMA requirements document. The distribution is determined by the DL, based on knowledge of the subject matter and any feedback from the Office of the General Counsel and the Office of External Relations.

B.2.1 Approved for public release; distribution is unlimited.

B.2.2 Approved for release to U.S. Government employees and their contractors; distribution is limited.

B.3 Authority Statement. Designate the higher level authority(ies)/requirement(s) that justifies establishing the SMA requirements document.

B.3.1 For NPDs, the higher level authority may be an external document such as Public Law or it may be a higher level NPD.

B.3.2 For NPRs, the higher level authority shall be an NPD.

B.3.3 For all other SMA requirements documents, the higher level authority may be either an NPD or an NPR.

B.4 References

B.4.1 Only list documents as references if they are cited within the text of the document. If you wish to include a list of suggested or related reading, include it as an appendix.

B.4.2 When citing NPDs or NPRs as references, record the citation without the revision letter. NPDs and NPRs become effective upon signature and only the current revision is effective.

B.4.3 Make sure that all references cited are current and correct. The only draft documents that may be cited as references are draft NPDs or NPRs that have formally been entered into NODIS review and are accessible in the NODIS drafts website.

B.4.4 Use footnotes (or URLs) to show readers precisely where to find references that are not readily available to all users in the NASA Directives System.

B.5 Requirements Statements

B.5.1 General.

B.5.1.1 For each requirements statement, specify who must take the action and what action must be taken.

B.5.1.2 Make sure that at least one person or organization is designated as responsible and accountable for completion of the requirement.

B.5.1.3 All requirements shall have associated objective quality evidence for compliance statements.

B.5.2 Clearly distinguish between requirements and nonrequirements. (A requirement is a single action that is to be performed.)

B.5.2.1 Use the correct phrasing.

B.5.2.1.1 For requirements, use the word “shall.”

B.5.2.1.2 The word “may” shall only be used if the requirement is granting permission to perform an action.

B.5.2.1.3 It is prohibited to use the word “should” or the word “will” to denote a requirement.

B.5.2.2 The following definitions apply:

B.5.2.2.1 Shall – "Shall" means the imperative. Action is mandatory.

B.5.2.2.2 May –"May" denotes the permissive; confers a discretionary privilege. Action is optional. However, the words "no person may ..." mean that no person is required, authorized, or permitted to do the act described.

B.5.2.2.3 Should - "Should" means an expected course of action or policy that is to be followed unless inappropriate for a particular circumstance. Action is optional.

B.5.2.2.4 Will – - “Will” anticipates a future action. Action is optional.

B.5.2.3 In all SMA requirements documents, place the word “Requirement” in parenthesis after each requirement statement. Example: (Requirement).

B.5.3 Include only one requirement statement per paragraph.

B.5.4 Avoid caveat phrases (e.g., as applicable, as appropriate, whenever possible) within requirements statements.

B.6 Responsibility Statements

B.6.1 Designate responsibilities and procedural requirements for NASA organizations in NPDs and NPRs.

B.6.2 Except in extraordinary circumstances, assign responsibilities at a level that allows an organizational leader to organize or assign responsibilities within the leader's organization.

B.7 Measurements Statements

B.7.1 Define measurements that shall be collected to support senior management evaluation of performance for compliance and implementation of the Agency's policies.

B.7.2 For all measurement statements, indicate:

B.7.2.1 What data must be collected

B.7.2.2 Who is responsible for collecting and reporting the data

B.7.2.3 To whom the data is delivered

B.7.2.4 How often the data is reported/delivered.

B.7.3 Identify measurement data that responds to requirements levied external to the Agency to provide traceability to those requirements, for example, Government Performance and Results Act reporting requirements.

B.8 Verification

B.8.1 Make sure that all requirements are verifiable with objective quality evidence of compliance.

B.9 Writing Style

B.9.1 Use gender-neutral language.

B.9.2 Use plain language as directed in the President's Memorandum for the Heads of Executive Departments and Agencies, dated June 1, 1998, Subject: Plain Language in Government Writing.

B.9.3 Use NPR 1450.10 and *The Gregg Reference Manual* as style references.

B.9.4 Adhere to the following style rules when writing SMA requirements documents:

B.9.4.1 Limit sentences to one thought.

B.9.4.2 Use parallel construction (the same grammatical structure for similar or related ideas).

B.9.4.3 Write in the active voice (name an actor with the action immediately after) because it is more direct and forceful; e.g., "The Chair shall forward one information copy of the board meeting minutes to the members."

B.9.4.4 Spell out an acronym or abbreviation the first time it appears, followed by the acronym or abbreviation in parentheses. If an acronym or abbreviation appears only twice or infrequently, spell out the term every time and avoid the acronym entirely.

B.9.4.5 Limit paragraphs to a few lines and a few sentences.

B.9.4.6 Number every paragraph so that it may be referenced.

B.10 Basic Rules for Writing NPDs and NPRs

B.10.1 When there is a companion NPR or publication being processed during the same time as an NPD, the NPD shall be signed first. Hold the NPR or other publication until after the NPD has been signed to assure contents of the NPR are consistent with the related NPD.

B.10.2 Limit procedures documented in NPRs to procedural direction for essential or otherwise mandated items only. This includes procedural requirements that must be specified for reasons of safety, security, efficiency, and cost effectiveness.

B.10.3 Use standard placement for common Appendices in NASA NPRs.

B.10.3.1 Use Appendix A for the Definitions Appendix.

B.10.3.1.1 List definitions in alphabetical order.

B.10.3.1.2 Specify definitions only for terms used in the NPR and only if the definitions are uniquely different than used in dictionaries or other standard usage.

B.10.3.2 Place the Acronym Appendix no later than Appendix B.

B.10.3.3 If you need to document an organizational charter for a group lower than councils, boards, committees, and panels specified within NPR 1000.3 (for example, working group charters), you may use an appendix within an NPR.

B.10.4 Use the following applicability statement for all OSMA NPDs and NPRs: "This (NPD or NPR) is applicable to NASA Headquarters and NASA Centers, including Component Facilities."

B.10.5 Adhere to the following prohibitions when writing NPDs and NPRs.

B.10.5.1 Do not put guidance (statements of expectation that do not mandate compliance) into NPDs or NPRs. NPDs and NPRs may include contextual information that supports the understanding of requirements.

B.10.5.2 Do not put technical requirements (a system or equipment must do something) in NPDs or NPRs. Technical requirements may be included in Technical Standards, which may then be cited in NPDs or NPRs.

B.10.5.3 Do not use bullets and dashes in NPDs or NPRs.

B.10.5.4 Do not use figures, forms, graphics, or tables in the text of an NPD.

B.10.5.5 Do not duplicate existing internal or external requirements within NPDs and NPRs.

Note: Cross-referencing may be used to cite existing requirements. NPDs and NPRs may supplement/clarify/make more stringent external requirements or designate who is responsible for implementation of external requirements but shall not repeat them nor lessen them.

B.10.5.6 Do not include a responsibility to maintain the document within the document. The Responsible Office designation delineates this responsibility.

B.10.5.7 Do not include requirements in appendices of NPRs. Use appendices for supporting information for the core elements of the NPR.

B.10.5.8 Do not include requirements for contractors. SMA NPDs and NPRs are not intended to be applied directly on contracts.

Checklist for DLs.

The following checklist is a tool for DLs to use to keep track of completion of key process steps.

DONE?	PROCESS STEPS
	OSMA staff member obtains **Division Director** agreement that the new or updated SMA requirements document is needed.
	Division Director obtains **Management Council** agreement that the new or updated SMA requirements document is needed.
	Document Lead notifies **Document Tree Manager** of the new or updated SMA requirements document.
	Document Lead develops draft.
	Division Director concurs on draft.
	Document Lead provides approved draft SMA requirements document and list of reviewers for discipline review (names and email addresses) in an electronic format to the **Director, Safety and Assurance Requirements Division**. (Minimum list shall include all OSMA Division Directors, and each Center SMA director. Other reviewers are added based on subject and interfaces.)
	Director, Safety and Assurance Requirements Division, sends out document for discipline review.
	Document Tree Manager updates SMA Documentation Tree.
	Document Lead develops a response for each comment received, prepares a disposition matrix of all comments received and their disposition, and updates document based on comments.
	Division Director reviews submission and determines whether the draft is acceptable for further processing, and if the draft is processed to NODIS or directly for signature.
	FOR DRAFTS TO BE PROCESSED IN NODIS
	Document Lead and Directives Manager prepare the concurrence package for release to NODIS. (Concurrence package contains draft, disposition matrix, and completed NHQ Form 184.)
	Directives Manager routes package for concurrence.
	Document Lead provides electronic copy of final draft and comment disposition matrix to the **Director, Safety and Assurance Requirements Division**, and the **Document Tree Manager**.
	After concurrences, the **Director, Safety and Assurance Requirements Division,** provides comment dispositions and revised document to reviewers for feedback.
	Directives Manager enters the directive into NODIS for formal review. After completion of NODIS review, **Directives Manager** provides final copy to the SMARTS Manager.
	FOR DRAFTS NOT CONTROLLED BY THE NODIS PROCESS
	Document Lead prepares the document package for the Chief SMA Officer signature. (Package contains the original document, matrix of review comments and disposition, supporting documentation, and final version of SMA requirement document that is to be approved.)
	Document Tree Manager assigns final document number.
	Division Director reviews staffing package for completeness and forwards for signature.
	Document Lead provides electronic copy of final draft and comment disposition matrix to the **Director, Safety and Assurance Requirements Division**, and the **Document Tree Manager**.
	Director, Safety and Assurance Requirements Division, provides final draft and disposition matrix to reviewers for feedback.
	Chief Safety and Mission Assurance Officer reviews staffing package and signs document.
	Document Lead provides an electronic copy and a hard copy of the signed document to the Document Tree Manager and the SMARTS Manager.
	Document Tree Manager posts signed document to SMA Documentation Tree and updates meta-data.
	If the document is an adopted standard, the **Document Tree Manager** forwards the signed adoption notice to the NASA Technical Standards Program Office. If the document is a NASA-STD, the **Document Tree Manager** informs the NASA Standards homepage curator of the release of the new or updated document.